CLAIMS

WHAT IS CLAIMED IS:

1. A method comprising:

building a trace comprising instructions;

building a trace block comprising said instructions;

scheduling said instructions within said trace block disregarding data dependencies from any off trace basic blocks, wherein at least one of said instructions is moved during said scheduling; and

correcting errors due to said at least one of said instructions being moved.

2. The method of Claim 1 wherein said trace comprises basic blocks comprising said instructions.

3. The method of Claim 2 wherein said building a trace block comprises:

adding join instructions associated with said basic blocks to said trace block;

appending said instructions into said trace block; and

mapping said instructions to said join instructions.

4. The method of Claim 3 wherein said correcting errors comprises remapping said instructions to said join instructions after said scheduling.

5. The method of Claim 4 wherein said correcting errors further comprises determining whether said instructions are mapped to the same join instructions of said join instructions after said scheduling as before said scheduling.

6. The method of Claim 1 wherein said correcting errors comprises renaming registers of said instructions.

7. The method of Claim 6 further comprising moving values from registers having new names to registers having old names.

8. The method of Claim 1 wherein said correcting errors comprises adding compensation code.

9. A method comprising:

building a trace comprising a first basic block and a second basic block, said first basic block comprising a first instruction, said second basic block comprising a second instruction;

building a trace block comprising said first instruction and said second instruction;

scheduling said first instruction and said second instruction within said trace block disregarding data dependencies from off trace basic blocks, wherein said second instruction is moved from said second basic block to said first basic block during said scheduling; and

correcting errors due to said second instruction being moved.

10. The method of Claim 9 wherein said correcting errors comprises renaming a register of said second instruction.

11. The method of Claim 10 wherein said register is renamed from an old name to a new name during said renaming.

12. The method the Claim 11 wherein said correcting errors comprises inserting a move instruction into said second basic block to move a value in a register having said new name into a register having said old name.

13. The method of Claim 9 further comprising building a control flow graph comprising said trace, said control flow graph further comprising an off trace basic block having an edge coming into said second basic block.

14. The method of Claim 13 wherein said correcting errors comprises adding a compensation basic block between said off trace basic block and said second basic block.

15. The method of Claim 14 further comprising inserting a copy of said second instruction after said renaming into said compensation basic block.

16. A system comprising:

a processor; and

a memory having a method of scheduling instructions using a trace scheduler stored therein, wherein upon execution of said method, said method comprises:

building a trace comprising said instructions;

building a trace block comprising said instructions;

scheduling said instructions within said trace block disregarding data dependencies from any off trace basic blocks, wherein at least one of said instructions is moved during said scheduling; and

correcting errors due to said at least one of said instructions being moved.

17. The system of Claim 16 wherein said trace comprises basic blocks comprising said instructions.

18. The system of Claim 17 wherein said building a trace block comprises:

adding join instructions associated with said basic blocks to said trace block;

appending said instructions into said trace block; and

mapping said instructions to said join instructions.

19. The system of Claim 18 wherein said correcting errors comprises remapping said instructions to said join instructions after said scheduling.

20. The system of Claim 19 wherein said correcting errors further comprises determining whether said instructions are mapped to the same join instructions of said join instructions after said scheduling as before said scheduling.

21. The system of Claim 16 wherein said correcting errors comprises renaming registers of said instructions.

22. The system of Claim 21 further comprising moving values from registers having new names to registers having old names.

23. The system of Claim 16 wherein said correcting errors comprises adding compensation code.

24. A computer system comprising:

means for building a trace comprising instructions;

means for building a trace block comprising said instructions;

means for scheduling said instructions within said trace block disregarding data dependencies from any off trace basic blocks, wherein at least one of said instructions is moved during said scheduling; and

means for correcting errors due to said at least one of said instructions being moved.

25. A computer program product having a method of scheduling instructions using a trace scheduler stored therein, wherein upon execution of said method, said method comprises:

building a trace comprising said instructions;

building a trace block comprising said instructions;

scheduling said instructions within said trace block disregarding data dependencies from any off trace basic blocks, wherein at least one of said instructions is moved during said scheduling; and

correcting errors due to said at least one of said instructions being moved.

26. The computer program product of Claim 25 wherein said trace comprises basic blocks comprising said instructions.

27. The computer program product of Claim 26 wherein said building a trace block comprises:

adding join instructions associated with said basic blocks to said trace block;

appending said instructions into said trace block; and

mapping said instructions to said join instructions.

28. The computer program product of Claim 27 wherein said correcting errors comprises remapping said instructions to said join instructions after said scheduling.

29. The computer program product of Claim 28 wherein said correcting errors further comprises determining whether said instructions are mapped to the same join instructions of said join instructions after said scheduling as before said scheduling.

30. The computer program product of Claim 25 wherein said correcting errors comprises renaming registers of said instructions.

31. The computer program product of Claim 30 further comprising moving values from registers having new names to registers having old names.

32. The computer program product of Claim 25 wherein said correcting errors comprises adding compensation code.